<u>**REMARKS/ARGUMENTS**</u>

The Applicants originally submitted Claims 1-21 in the application. The Applicants have not amended, canceled or added any claims. Accordingly, Claims 1-21 are currently pending in the application.

I.   Rejection of Claims 1-14 under 35 U.S.C. §103

The Examiner has rejected Claims 1-14 under 35 U.S.C. §103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of U.S. Patent No. 4,562,425 to Turner, *et al.,* in further view of a portion of the textbook prepared by Rappaport and in further view of U.S. Patent No. 6,553,087 to Alelyunas, *et al.* The Applicants disagree since the cited combination does not teach or suggest recognizing zero-amplitude symbols in a quadrature amplitude modulated (QAM) signal as recited in independent Claims 1 and 8.

The Examiner recognizes that the combination of AAPA, Turner and Rappaport does not teach or suggest recognizing a candidate symbol as being a zero-amplitude symbol when the candidate symbol is closer to an origin of a constellation than to symbols proximate thereto as recited in independent Claims 1 and 8. (*See* Examiner's Action, pages 3-4.) To cure this deficiency, the Examiner cites Alelyunas. (*See* Examiner's Action, page 4.)

Alelyunas is directed to an interpolating bandpass filter for packet-data receiver synchronization. (*See* column 1, lines 16-19.) Alelyunas discloses a receiver having a slicer that chooses from a set of possible valid receivable levels a level, or "point" which most closely matches the current received signal level. A decoder then converts the selected point to a set of bits in a stream. (*See* column 3, lines 41-43.)

Alelyunas, therefore, determines a symbol in a signal by matching the signal level associated with the symbol to the closet known signal level. Alelyunas provides no teaching or suggestion of classifying the incoming symbol according to a position relative to the origin of the constellation and neighboring symbols. More specifically, Alelyunas does not teach or suggest recognizing a candidate symbol as being a zero-amplitude symbol when the candidate symbol is closer to an origin of a constellation than to symbols proximate thereto as recited in independent Claims 1 and 8. Instead, Alelyunas compares an incoming signal level of a symbol to known signal levels. Thus, Alelyunas does not consider an origin nor symbols proximate thereto when interpreting symbols. Alelyunas, therefore, does not cure the above deficiency of the combination of AAPA, Turner and Rappaport.

Since the cited combination of AAPA, Turner, Rappaport and Alelyunas does not teach or suggest recognizing a candidate symbol as being a zero-amplitude symbol when the candidate symbol is closer to an origin of a constellation than to symbols proximate thereto, the cited combination does not teach or suggest each element of independent Claims 1 and 8. The cited combination, therefore, does not provide a *prima facie* case of obviousness of independent Claims 1 and 8 and Claims dependent thereon. As such, Claims 1-14 are not unpatentable in view of the cited combination. Accordingly, the Applicants respectfully request the Examiner to withdraw the §103(a) rejection with respect to Claims 1-14 and allow issuance thereof.

Additionally, the Applicants do not find where the Examiner presented that the cited combination teaches or suggests the additional elements of dependent Claims 4-5, 7, 11-12 and 14. The Applicants also do not find where the cited combination teaches or suggests each additional element of Claims 4-5, 7, 11-12 and 14. In fact, specifically addressing dependent Claims 7 and 14,

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the cited combination teaches away from a zero-amplitude symbol interpreter that is free of a slicer table. Instead, as asserted by the Examiner, Alelyunas discloses a slicer table. (*See* Examiner's Action, page 4.) Accordingly, the cited combination does not teach or suggest each of the additional elements recited in dependent Claims 4-5, 7, 11-12 and 14.

II.   Rejection of Claims 15-21 under 35 U.S.C. §103

The Examiner has rejected Claims 15-21 under 35 U.S.C. §103(a) as being unpatentable over Alelyunas in view of Rappaport, AAPA and in further view of Turner. The Applicants disagree.

As discussed above, the cited combination of Alelyunas, Rappaport, AAPA and Turner does not teach or suggest recognizing a candidate symbol as being a zero-amplitude symbol when the candidate symbol is closer to an origin of a constellation than to symbols proximate thereto as recited in independent Claims 1 and 8. The cited combination, therefore, also does not teach or suggest each element of independent Claim 15 which also includes recognizing a candidate symbol as being a zero-amplitude symbol when the candidate symbol is closer to an origin of a constellation than to symbols proximate thereto. Thus, the cited combination of AAPA, Turner, Rappaport and Alelyunas does not provide a *prima facie* case of obviousness of independent Claim 15 and Claims dependent thereon. As such, Claims 15-21 are not unpatentable in view of the cited combination. Accordingly, the Applicants respectfully request the Examiner to withdraw the §103(a) rejection with respect to Claims 15-21 and allow issuance thereof.
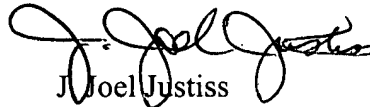
III.   Conclusion

In view of the foregoing remarks, the Applicants now see all of the Claims currently pending in this application to be in condition for allowance and therefore earnestly solicit a Notice of Allowance for Claims 1-21.

The Applicants request the Examiner to telephone the undersigned attorney of record at (972) 480-8800 if such would further or expedite the prosecution of the present application.

Respectfully submitted,

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